CLAIMS

WHAT IS CLAIMED IS:

1. A method of inserting a plurality of entries into an index keyed by multidimensional data, comprising:

selecting subsets of the index that overlap if the entries are inserted into the subsets of the index;

inserting the entries within the subsets of the index; and

reorganizing the subsets of the index with the inserted entries.

2. A method according to claim 1, wherein said reorganizing includes reorganizing such that an amount of overlap of bounding boxes for objects in the strict subset of the index is reduced.

3. A method according to claim 1, wherein:

the entries include spatial data; and

the index keyed by multidimensional data includes a spatial index.

4. A method according to claim 1, wherein the subset include sibling nodes of an R-Tree index.

5. A computer-readable medium bearing instructions for inserting the entries into the spatial, said instructions arranged, upon execution by one or more processors, to perform the method according to claim 1.

6. A method of inserting a plurality of entries into a spatial index, comprising:

selecting at least two and less than all children of a node in the spatial index;

distributing the entries within the selected children; and

reorganizing objects distributed within the selected children.

7. A method according to claim 6, wherein said reorganizing includes reorganizing such that an amount of overlap of bounding boxes for objects in the spatial index is reduced.

8. A method according to claim 7, wherein one of the bounding boxes includes a minimum bounding rectangle (MBR).

9. A method according to claim 6, wherein at least two of the selected children have respective bounding boxes that overlap with one another.

10. A method according to claim 6, wherein said selecting includes selecting exactly two of the children.

11. A method according to claim 10, wherein the exactly two of the children have respective bounding boxes that overlap with one another.

12. A method according to claim 6, wherein the object distributed among the selecting children include the entries.

13. A computer-readable medium bearing instructions for inserting the entries into the spatial index, said instructions arranged, upon execution by one or more processors, to perform the method according to claim 6.

14. A method of inserting a plurality of entries into a multidimensional-keyed index organized as an R-Tree, comprising:

associating a node in the R-tree with a buddy node that is a sibling of the node;

clustering children of the node and the children of the buddy;

partitioning the clustered children and the entries into a plurality of groups, wherein at least one of the groups includes a child node of the cluster node, a buddy child node associated the child node, and one or more of the entries; and

inserting said one or more of the entries among the child node and the buddy child node associated the child node.

15. A method according to claim 14, wherein:

each node of the R-tree is associated with a respective bounding box; and

a first bounding box associated with the child node overlaps a second bounding box associated with the buddy child node.

16. A method according to claim 14, where said partition is perform so than overlap among bounding boxes associated with the groups is reduced.

17. A computer-readable medium bearing instructions for inserting the entries into the spatial index, said instructions arranged, upon execution by one or more processors, to perform the method according to claim 14.